

**Notice of Intent to Issue  
Funding Opportunity Announcement No.: DE-FOA-0000036**

In support of the American Recovery and Reinvestment Act of 2009<sup>1</sup>, the Department of Energy's (DOE) National Energy Technology Laboratory (NETL) intends to issue, on behalf of the DOE Office of Electricity Delivery and Energy Reliability, a Funding Opportunity Announcement (FOA) entitled "Smart Grid Demonstrations." The subject FOA will include three topical areas of interest: Regional Smart Grid Demonstrations, Utility-Scale Energy Storage Demonstrations, and Regional Synchrophasor Demonstrations.

Cooperative Agreements issued under this requirement will support regionally unique demonstration projects in each of the following areas:

**Regional Demonstrations**

These projects are expected to be regionally unique demonstrations to quantify smart grid costs and benefits, verify smart grid technology viability, and validate new smart grid business models including application of cyber security measures, at a scale that can then be readily planned and replicated around the country. In accordance with Section 1304 (b) of the Energy Independence and Security Act of 2007<sup>2</sup> (EISA 2007), whereby DOE will establish a smart grid regional demonstration initiative to achieve the Initiative goals defined in 1304 (b). This will include collaborations with the Power Marketing Administrations.

**Utility-Scale Energy Storage Demonstrations**

These projects are expected to be unique demonstrations of major utility-scale energy storage installations. In accordance with EISA 2007 Section 641 (i)<sup>2</sup>, and any amendments thereof in the American Recovery and Reinvestment Act of 2009<sup>1</sup>, the projects will help to establish costs and benefits, verify technical performance, and validate system reliability and durability, at scales that can be readily planned and replicated around the country. Energy storage systems include, but are not limited to, the following technologies: advanced battery systems (including flow batteries), ultra-capacitors, flywheels, and compressed air energy systems. Application areas include wind and photovoltaic (PV) integration, upgrade deferral of transmission and distribution assets, congestion relief, and system regulation. Projects are also sought for development to bring promising utility scale storage technologies to market readiness in the U.S.

**Synchrophasor Demonstrations**

Synchrophasor projects are expected to demonstrate innovative, network-based applications of time-synchronized phasor measurement technologies, otherwise known as synchrophasors, in ways that can be replicated in a secure manner around the country. To fully leverage the capabilities of this technology, it is

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<sup>1</sup> Pub. L. 111-005: American Recovery and Reinvestment Act of 2009

<sup>2</sup> Pub. L. 110-140: Energy Independence and Security Act of 2007

[http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110\\_cong\\_public\\_laws&docid=f:publ140.110](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_public_laws&docid=f:publ140.110)

necessary to install and network multiple high-resolution, time-synchronized grid monitoring devices, collect and analyze their data, and use those data to create a variety of wide-area information and insight for use in operating and planning the electric power system. These synchrophasor demonstration projects are encouraged to address local or regional power system operational issues that pose reliability concerns, consideration will also be given to applications that enhance bulk power system market operations. The synchrophasor demonstration projects are encouraged to incorporate elements that expand the deployment of synchrophasor measurement units (PMUs). These demonstration projects will be complementary to the Smart Grid Regional Demonstration Initiative, which aims at providing regional solutions and best practices in implementing smart grid technologies.

Each demonstration project should be carried out in cooperation and collaboration with the electric utility that owns the grid facilities in electricity control areas, or the electric utility that is a rural cooperative or publicly owned. The electric utility should be either the proposing applicant or a significant team member to the applicant. An integrated team approach that includes members of utilities, products and services suppliers, end users, state and municipal governments, the financial community, etc. will be strongly encouraged. The list of stakeholders should include: investor owned utilities, rural electric cooperatives, municipally owned electric utilities, prospective merchant plants, energy storage systems manufacturers, the renewable energy production industry, and State or local energy offices,

DOE envisions awarding multiple financial assistance awards in the form of cost-shared cooperative agreements. The cost share must be at least 50% of the total allowable costs for the projects and must come from non-Federal sources unless otherwise allowed by law. The estimated period of performance for each award is two to five years.

DOE plans to make the Funding Opportunity Announcement available in March, 2009. The Funding Opportunity Announcement will be available for viewing at Grants.gov (<http://www.grants.gov>) and at the DOE's Industry Interactive Procurement Systems (IIPS) or "e-center" (<https://e-center.doe.gov>). Applicants are strongly encouraged to register at these sites to receive notification of announcements posted by the National Energy Technology Laboratory. When the Funding Opportunity Announcement is released, applications will only be received through Grants.gov.

In anticipation of the Funding Opportunity Announcement being released shortly, there are several one-time actions prospective applicants must complete in order to submit an application through Grants.gov (e.g., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the Central Contract Registry (CCR), register with the credential provider, and register with Grants.gov). Due to the likelihood of a short response period, interested applicants are strongly encouraged to ensure these requirements have been met. Detailed information on the DUNS and CCR process is presented at <http://www.grants.gov/GetStarted>. Applicants may use the Grants.gov Organization Registration Checklist at

<http://www.grants.gov/assets/OrganizationRegCheck.pdf> to guide them through the process. Designating an E-Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in the CCR registration process. Applicants not yet registered with CCR and Grants.gov, should allow at least 21 days to complete these requirements. It is strongly recommended that the process be started as soon as possible.

If your organization does not have a DUNS number, go to the Dun & Bradstreet (D&B) online registration located at <http://fedgov.dnb.com/webform/displayHomePage.do> to receive a number free of charge or call 1-866-705-5711.

The Central Contractor Registration (CCR) collects, validates, stores, and disseminates business information about the Federal Government's trading partners in support of the contract award, grants, and the electronic payment processes.

To see if your organization is already registered with CCR, check the CCR website located at <http://www.bpn.gov/ccrinq/scripts/search.asp>. You will be able to search CCR by using either your organization's DUNS Number or legal business name. If your organization is already registered, take note of who is listed as the organization's E-Business Point of Contact (E-Business POC).

If your organization is not registered in CCR, go to the CCR Website at [www.ccr.gov](http://www.ccr.gov) and select the "Start New Registration" option to begin the registration process. Please allow up to 7 days for processing of your registration which includes the IRS validating your Employer Identification Number (Taxpayer Identification Number or Social Security Number). The organization's E-Business POC will be designated during the CCR registrations process. A special Marketing Partner ID Number (MPIN) is established as a password to verify the E-Business POC.

The DOE will not entertain questions at this time. Once the Funding Opportunity Announcement has been released, a "submit questions" feature will be defined.

#### DISCLAIMER

This Notice is issued so that interested parties are aware of the DOE's intention to issue this Funding Opportunity Announcement. Any of the information contained in this Notice is subject to change.